12. (Amended) The device of claim 11, wherein the remainder of the suspension separated from the cells is removed from the separation unit through the waste line.

B1 13. (Amended) The device of claim 11, wherein the solution line has a solution pump for controlling the flow of physiologic solution.

16. (Amended) The device of claim 15, wherein the control means controls a rate of delivery of at least one of the concentrated cell pump and the solution pump so as to concentrate red blood cells to a hematocrit of 60 to 98 percent.

B2 17. (Amended) The device of claim 15, wherein the control means controls a rate of delivery of at least one of the concentrated cell pump and the solution pump so as to concentrate red blood cells to a hematocrit of 85 percent.

B3 19. (Amended) The device of claim 11, wherein the separation unit has a shape selected from the group consisting of a ring and a spiral.

21. (Amended) The device of claim 11, wherein the device processes cell suspensions collected intraoperatively.

22. (Amended) The device of claim 11, wherein the device processes cell suspensions collected post-operatively.

B4 23. (Amended) A device for processing a suspension containing red blood cells for autotransfusion comprising at least one separation unit for concentrating red blood cells by centrifugation, the separation unit comprising a suspension inlet connected to a suspension inlet line having a suspension pump, a red blood cell outlet connected to a red blood cell outlet line having a red blood cell pump, and a waste outlet connected to a waste outlet line;

a dilution device comprising a physiologic solution tank and a solution line having a solution pump, the solution line providing fluid connection between the physiologic solution tank and the red blood cell outlet line, the connection between